Amendments to the Claims

Amended claims are as follows:

1. (CANCELLED)
2. (CANCELLED)
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5. (CANCELLED)
6. (CANCELLED)
7. (CANCELLED)
8. (CANCELLED)
9. (CANCELLED)
10. (CANCELLED)
11. (CANCELLED)
12. (CURRENTLY AMENDED) A system for processing an audio~~a musical~~ signal, comprising:

a first simulation model;

a second simulation model; and

a simulation model generator coupled with the first and second ~~amplification~~ simulation models, the simulation model generator capable of warping between the first and second simulation models, thereby ~~and the simulation model generator capable of~~ producing a generated simulation model, wherein the generated simulation model receives and processes the audio signal.

13. (CURRENTLY AMENDED) The ~~method~~ system of Claim 12 ~~12~~, where the first simulation model, the second simulation model and the generated simulation model all comprise at least one of an amplifier simulation model, a cabinet simulation model, a reverb simulation model, a time-variant effect simulation model ~~such as a modulation effects simulation model including at least one of a chorus modulation effect, a flanger modulation effect, a phaser modulation effect, a pitch-shifter modulation effect, a rotary simulator modulation effect, and an intelligent harmony modulation effect~~, and a delays simulation model.

14. (NEW) The system of Claim 13, where the time-variant effect simulation model includes a modulation effects simulation model.

15. (NEW) The system of Claim 14, where the modulation effects simulation model includes an effect selected from a group comprising a chorus modulation effect, a flanger modulation effect, a phaser modulation effect, a pitch-shifter modulation effect, a rotary simulator modulation effect, and an intelligent harmony modulation effect.

16. (NEW) The system of Claim 14 where the system is implemented by computer logic according to computer-executed instructions stored in a computer-readable medium.

17. (NEW) The system of Claim 14 where the system is implemented by computer logic according to computer-executed instructions embodied in a computer-readable electromagnetic signal.

18. (NEW) A system for processing an audio signal, comprising:

a first cabinet speaker simulator;

a second cabinet speaker simulator; and

a warp control coupled with the first cabinet speaker simulator and the second cabinet speaker subsystem and where the warp control receives and customizes the audio signal as a function of the first and second cabinet speaker simulators.

19. (NEW) The system of Claim 18 where the system is implemented by computer logic according to computer-executed instructions stored in a computer-readable medium.

20. (NEW) The system of Claim 18 where the system is implemented by computer logic according to computer-executed instructions embodied in a computer-readable electromagnetic signal.

21. (NEW) A system for processing an audio signal, comprising:

a cabinet-speaker simulator for processing the audio signal and including a cabinet simulation model that is a function of a sample rate; and

a user control in communication with the cabinet-speaker simulator and simulating an effect of a change in the sample rate.

22. (NEW) The system of Claim 21, where the user control includes a virtual sampling rate.

23. (NEW) The system of Claim 22, where the virtual sampling rate is a function of the sampling rate.

24. (NEW) The system of Claim 21, where the user control includes a user-controllable variable.

25. (NEW) The system of Claim 24, where the user-controllable variable is a function of the sampling rate.

26. (NEW) The system of Claim 25, where the cabinet simulation model includes an finite impulse response filter that is a function of the user-controllable variable.

27. (NEW) The system of Claim 26, where the finite impulse response filter (H(z)) is further a function of a number of filter taps (L), a plurality of coefficients ($a_0, a_1, ..., a_L$), an inverse of the user-controllable variable (M), and an equation $H(z) = a_0 + a_1 z^{-M} + a_2 z^{-2M} + ... + a_L z^{-LM}$.

28. (NEW) The system of Claim 21 where the system is implemented by computer logic according to computer-executed instructions stored in a computer-readable medium.

29. (NEW) The system of Claim 21 where the system is implemented by computer logic according to computer-executed instructions embodied in a computer-readable electromagnetic signal.

30. (NEW) A method for processing an audio signal, comprising:

warping between a first simulation model and a second simulation model, thereby producing a generated simulation model.

31. (NEW) The method of Claim 30, where the first simulation model, the second simulation model and the generated simulation model all comprise at least one of an amplifier simulation model, a cabinet simulation model, a reverb simulation model, a time-variant effect simulation model, and a delays simulation model.

32. (NEW) The method of Claim 31, where the time-variant effect simulation model includes a modulation effects simulation model.

33. (NEW) The method of Claim 32, where the modulation effects simulation model includes an effect selected from a group comprising a chorus modulation effect, a flanger modulation effect, a phaser modulation effect, a pitch-shifter modulation effect, a rotary simulator modulation effect, and an intelligent harmony modulation effect.

34. (NEW) The method of Claim 30 where the method is implemented by computer logic according to computer-executed instructions stored in a computer-readable medium.

35. (NEW) The method of Claim 30 where the method is implemented by computer logic according to computer-executed instructions embodied in a computer-readable electromagnetic signal.

36. (NEW) A method for processing an audio signal, comprising:

providing a cabinet simulation model that is a function of a sampling rate for processing the audio signal; and

simulating an effect of a change in the sample rate.

37. (NEW) The method of Claim 36, where simulating the effect of the change in the sample rate in the cabinet simulation model includes making the cabinet simulation model a function of a virtual sampling rate.

38. (NEW) The method of Claim 37, where the virtual sampling rate is a function of the sampling rate.

39. (NEW) The method of Claim 36, where simulating the effect of the change in the sample rate in the cabinet simulation model includes making the cabinet simulation model a function of a user-controllable variable.

40. (NEW) The method of Claim 39, where the user-controllable variable is a function of the sampling rate.

41. (NEW) The method of Claim 39, where making the cabinet simulation model the function of the user-controllable variable includes defining the cabinet simulation model by a finite impulse response filter that is a function of the user-controllable variable.

42. (NEW) The method of Claim 41, where the finite impulse response filter (H(z)) is further a function of a number of filter taps (L), a plurality of coefficients

$(a_0, a_1, ..., a_L)$, an inverse of the user-controllable variable (M), and an equation $H(z) = a_0 + a_1 z^{-M} + a_2 z^{-2M} + ... + a_L z^{-LM}$.

43. (NEW) The method of Claim 36 where the method is implemented by computer logic according to computer-executed instructions stored in a computer-readable medium.

44. (NEW) The method of Claim 36 where the method is implemented by computer logic according to computer-executed instructions embodied in a computer-readable electromagnetic signal.